IN THE CLAIMS

Please cancel claims 7, 11, 17-22 without prejudice or disclaimer.

Please add the following new claims 24-27.

Please amend claims 1, 2, 4, and 10 as follows.

This listing of the claims replaces all prior versions of the claims in the application.

1. (Currently Amended) An isolated polypeptide ~~comprising an amino acid sequence~~ selected from the group consisting of:

a) a polypeptide comprising an amino acid sequence ~~selected from the group consisting~~ of ~~SEQ ID NO:2, SEQ ID NO:3,~~ SEQ ID NO:4, ~~SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:16, SEQ ID NO:11, and SEQ ID NO:12,~~

b) a polypeptide comprising a naturally occurring amino acid sequence having at least 90% sequence identity to an amino acid sequence ~~selected from the group consisting~~ of ~~SEQ ID NO:2, SEQ ID NO:3,~~ SEQ ID NO:4, ~~SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:16, SEQ ID NO:11, and SEQ ID NO:12~~, and

c) a biologically active fragment of a polypeptide comprising an amino acid sequence ~~selected from the group consisting~~ of ~~SEQ ID NO:2, SEQ ID NO:3,~~ SEQ ID NO:4~~, SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:16, SEQ ID NO:11, and SEQ ID NO:12, and~~

~~d) an immunogenic fragment of an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:16, SEQ ID NO:11, and SEQ ID NO:12~~.

2. (Currently Amended) An isolated polypeptide of claim 1 comprising ~~selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3,~~ SEQ ID NO:4~~, SEQ ID NO:6, SEQ ID NO:9, SEQ ID NO:16, SEQ ID NO:11, and SEQ ID NO:12~~.

3. (Original) An isolated polynucleotide encoding a polypeptide of claim 1.

4. (Currently Amended) An isolated polynucleotide of claim 3 comprising ~~selected from the group consisting of SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15,~~ SEQ ID NO:16~~, SEQ ID NO:18, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24~~.

5. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

6. (Original) A cell transformed with a recombinant polynucleotide of claim 5.

7. (Canceled)

8. (Original) A method for producing a polypeptide of claim 1, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and

b) recovering the polypeptide so expressed.

9. (Original) An isolated antibody which specifically binds to a polypeptide of claim 1.

10. (Currently Amended) An isolated polynucleotide ~~comprising a polynucleotide sequence~~ selected from the group consisting of:

a) a polynucleotide comprising a polynucleotide sequence ~~selected from the group consisting~~ of ~~SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15,~~ SEQ ID NO:16~~, SEQ ID NO:18, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24~~,

b) a polynucleotide comprising a naturally occurring polynucleotide sequence having at least 90% sequence identity to a polynucleotide sequence ~~selected from the group consisting~~ of ~~SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15,~~ SEQ ID NO:16~~, SEQ ID NO:18, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24~~,

c) a polynucleotide ~~sequence~~ complementary to a polynucleotide of a),

d) a polynucleotide ~~sequence~~ complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

11. (Canceled)

12. (Original) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 10, the method comprising:

a) hybridizing the sample with a probe comprising at least 16 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide, and

b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

13. (Original) A method of claim 12, wherein the probe comprises at least 30 contiguous nucleotides.

14. (Original) A method of claim 12, wherein the probe comprises at least 60 contiguous nucleotides.

15. (Original) A pharmaceutical composition comprising an effective amount of a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

16. (Original) A method for treating a disease or condition associated with decreased expression of functional LIPAP, comprising administering to a patient in need of such treatment the pharmaceutical composition of claim 15.

17-22. (Canceled)

23. (Original) A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 4, the method comprising:

a) exposing a sample comprising the target polynucleotide to a compound, and

b) detecting altered expression of the target polynucleotide.

24. (New) A microarray wherein at least one element of the microarray is a polynucleotide of claim 10.

25. (New) A method of generating an expression profile of a sample which contains polynucleotides, the method comprising:

a) labeling the polynucleotides of the sample,

b) contacting the elements of the microarray of claim 24 with the labeled polynucleotides of the sample under conditions suitable for the formation of a hybridization complex, and

c) quantifying the expression of the polynucleotides in the sample.

26. (New) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 10, the method comprising:

a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and

b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

27. (New) A method of assessing toxicity of a test compound, the method comprising:

a) treating a biological sample containing nucleic acids with the test compound,

b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 10 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target

polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 10 or fragment thereof,

c) quantifying the amount of hybridization complex, and

d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.